COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Piedmont Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Nevamar Company, LLC
Waverly, Virginia
Permit No. PRO-50169

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Nevamar Company, LLC has applied for a Title V Operating Permit for its Waverly facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date:_____

Peer Review:_____ Date:_____

FACILITY INFORMATION

Permittee	Nevamar Company, LLC 721 West Main Street Waverly, Virginia 23890
Facility	Waverly Particleboard Plant 721 West Main Street Waverly, Virginia 23890

County-Plant ID Number: 183-0001

SOURCE DESCRIPTION

SIC Code: 2493, Particleboard Manufacturing Facility

This facility manufactures particleboard from wood shavings, sawdust, recycled oriented strand board, and chips (collectively referred to as shavings), urea-formaldehyde resin, wax emulsion, and urea scavenger. Primary operations at the facility include receiving and storage of wood shavings, drying and refining of wood shavings, board mat forming, board pressing, use of rough and finish trim saws, and sanding. Fuels used in the facility's boilers and dryers consist of wood dust, natural gas, and distillate oil.

The facility is a Title V major source of PM10, NOx, CO, and VOC as well as total hazardous air pollutants. This source is located in an attainment area for all pollutants, and is not a PSD major source. The facility was previously permitted under a state operating permit, dated July 17, 2002.

COMPLIANCE STATUS

The facility is inspected once per year. The most recent inspection was performed on June 27, 2002, and the facility was found to be in compliance.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Emission Unit Description (Construction Date)	Maximum Rated Capacity	Pollution Control Device (PCD)	PCD-ID	Pollutant Controlled	Exhaust ID	Applicable Permit Date
Wood Products Receiving and Storage, Maximum rated capacity of 125 tons/hr							
EP-D1	Front end loading from storage					EP-D1	7/17/2002
EP-D2	Truck dump					EP-D2	7/17/2002
EP-D3	#1 incline conveyor transfer point					EP-D3	7/17/2002
EP-D4	#1 storage conveyor transfer point					EP-D4	7/17/2002
EP-D5	Old truck dump					EP-D5	7/17/2002
EP-D6	Storage house feed					EP-D6	7/17/2002
EP-D7	Trim waste conveyor to storage house					EP-D7	7/17/2002
EP-D8	#2 storage conveyor drop to #3 storage conveyor					EP-D8	7/17/2002
EP-D9	#2 storage conveyor drop to chip pile					EP-D9	7/17/2002
EP-D10	#3 storage conveyor					EP-D10	7/17/2002
EP-D11	Tipple conveyor to pile					EP-D11	7/17/2002
EP-D12	Tipple conveyor to #4 storage conveyor					EP-D12	7/17/2002
EP-D13	#4 Storage conveyor end					EP-D13	7/17/2002
EP-D14	#3 bin conveyor end					EP-D14	7/17/2002
EP-D15	Chute to scalper					EP-D15	7/17/2002
EP-D16	#4 Conveyor bin end					EP-D16	7/17/2002
EP-D18	#5 bin conveyor end					EP-D18	7/17/2002
EP-D22	Reclaim from storage; front end loader pickup					EP-D22	7/17/2002
EP-D23	Truck loading, front end loader					EP-D23	7/17/2002

Emission Unit ID	Emission Unit Description (Construction Date)	Maximum Rated Capacity	Pollution Control Device (PCD)	PCD-ID	Pollutant Controlled	Exhaust ID	Applicable Permit Date
EP-D24	Truck loading drop to truck					EP-D24	7/17/2002
Boilers							
B-3	Ames boiler (1961)	5.03 mmbtu/hr				EP-B-3	7/17/2002
B-2	Cleaver Brooks Boiler (1980)	10.46 mmbtu/hr				EP-B-2	7/17/2002
B-1	Keeler Boiler(1977)	26.54 mmbtu/hr sanderdust 23 mmbtu/hr #2 oil	Joy multicyclone centrifugal collector 9VM10, 18-3 with a control efficiency of 78% for PT	C01	PT	EP-B-1	7/17/2002
Face System							
FS-1A	Face System Pre Dryer and supplemental heater (1978)	7 tons/hr wood furnish 25 mmbtu/hr natural gas 25 mmbtu/hr #2	General Sheet Metal Cyclone, 10 feet diameter	C02	PT	EP-FS-1	7/17/2002
FS-1B	McConnell Sanderdust Burner for Face Pre Dryer (1980)	28 mmbtu/hr sanderdust					
FS-2	Face System Final Dryer Guaranteed Performance (1973)	18.5 tons/hr wood furnish 25 mmbtu/hr natural gas 25 mmbtu/hr #2	Burning and Federle cyclone, 14 feet diameter	C03	PT	EP-FS-2	7/17/2002
EP-D17	Drop into Face Sawdust Bin (1978)	7000 cubic feet				EP-D17	7/17/2002
EP-D28	Drop from sawdust screen overs					EP-D28	7/17/2002
EP-D19	Drop into Miller Hoff bin (face furnish)	7360 cubic feet				EP-D19	7/17/2002
FS-3A	Hog (1997)	12.6 tons wood/hr	Face Screen Baghouse Western pneumatics, Inc, 80 Cartridge Model. with a design control efficiency of 99.9% and a maximum system air movement capacity of 14000 ACFM.	C04	PT	EP-FS-3	7/17/2002
FS-3B	Accepts Aspirator (1997)	4.6 tons wood/hr					
FS-3C	Fines Aspirator (1997)	3.2 tons wood/hr					
5	Face Final dryer Infeed Conveyor (1997)	18.5 tons/hr	Enclosure				7/17/2002

Emission Unit ID	Emission Unit Description (Construction Date)	Maximum Rated Capacity	Pollution Control Device (PCD)	PCD-ID	Pollutant Controlled	Exhaust ID	Applicable Permit Date
5A	Shavings Transfer Conveyor (1997)	23.0 tons/hr	Enclosure				7/17/2002
5B	Hog Discharge Transfer Conveyor (1997)	20.0 tons/hr	Enclosure				7/17/2002
5C	Hog Feed Conveyor (1997)	21.0 tons/hr	Enclosure				7/17/2002
5D	Hog Discharge Conveyor (1997)	20.0 tons/hr	Enclosure				7/17/2002
8	Overs Conveyor #2 (1997)	22.0 tons/hr	Enclosure				7/17/2002
8A	Overs Conveyor #1 (1997)	22.0 tons/hr	Enclosure				7/17/2002
36	Final Face Dryer Cyclone Discharge Conveyor (1997)	25.5 tons/hr	Enclosure				7/17/2002
37	Primary Screen Feed Conveyor (1997)	25.5 tons/hr	Enclosure				7/17/2002
38	Accepts Conveyor (1997)	4.6 tons/hr	Enclosure				7/17/2002
39	Fines Conveyor (1997)	3.2 tons/hr	Enclosure				7/17/2002
EP-D25	Rock Drop from Aspirators					EP-D25	7/17/2002
FS-4	Trim Recovery Bin (1973)	4608 cubic feet	Aerodyne Model 1600 SV 560 CR centrifuge	C05	PT	EP-FS-4	7/17/2002
FS-5A FS-5B FS-5C	Pallman Face Refiners 1, 2, and 3 (1973)	20 tons/hr	Baghouse Clarke Model 1-60-20 with a maximum system air movement capacity of 41908 ACFM.	C06	PT	EP-FS-5	7/17/2002
Core System							
EP-D21	Drop into Wet Shaving Silo (1966)	3696 cubic feet				EP-D21	7/17/2002
EP-D20	Drop into Dry Shaving Silo (1956)	28681 cubic feet				EP-D20	7/17/2002

Emission Unit ID	Emission Unit Description (Construction Date)	Maximum Rated Capacity	Pollution Control Device (PCD)	PCD-ID	Pollutant Controlled	Exhaust ID	Applicable Permit Date
CS-4A CS-4B CS-4C	Shaker Screens 1-5 (1965/1975)	19 tons of wood furnish/hr	Pneumafil RAF 11.5-320 baghouse with a maximum system air movement capacity of 44608 ACFM	C09	PT	EP-CS-4	7/17/2002
CS-5A CS-5B			Pneumafil RAF 11.5/320 Baghouse with a maximum system air movement capacity of 39384 ACFM.	C10	PT	EP-CS-5	7/17/2002
CS-6A CS-6B CS-6C CS-6D	Bauer Refiners 1-4 (1965-1967)	19 tons of wood furnish/hr	Clarke Model 1-40-20 fabric filter baghouse with a maximum system air movement capacity of 24344 ACFM.	C11	PT	EP-CS-6	7/17/2002
CS-7A CS-7B	Bauer Refiners 5-6 (1964)		Clarke Model 1-40-20 fabric filter baghouse with a maximum system air movement capacity of 24344 ACFM.	C12	PT	EP-CS-7	7/17/2002
CS-1	Core System Pre Dryer and supplemental heater (1956)	14 tons/hr wood furnish 25 mmbtu/hr natural gas 25 mmbtu/hr #2	General Sheet Metal cyclone 14 feet diameter	C07	PT	EP-CS-1	7/17/2002
CS-2	Core System Final Dryer and supplemental heater (1964)	19 tons/hr wood furnish 25 mmbtu/hr natural gas 25 mmbtu/hr #2	High Efficiency Cyclone Fisher-Klosterman, Inc, Size XQ120-50 11 feet diameter	C08	PT	EP-CS-2	7/17/2002
CS-3	Energex Wood Dust Burner (1975)	27.55 mmbtu/hr sanderdust				EP-CS-3	7/17/2002
Press Area							
PF-1	Production line reclaim from former tray cleanup, cutoff saw, conveyor dust pickups, prepress, prepress pickups, and prepress side trim saws (1964)	1.3 tons/hr	Clarke Model 1-60-20 fabric filter baghouse with a maximum system air movement capacity of 41408 ACFM.	C13	PT	EP-PF-1	7/17/2002
EP-D29	Overflow drop point from reject bin					EP-D29	7/17/2002
PF-2	Washington Iron Works Main Press (1964)	17000 converted feet/hr, ¾ inch basis				EP-PF-2A	7/17/2002
						EP-PF-2B	7/17/2002

Emission Unit ID	Emission Unit Description (Construction Date)	Maximum Rated Capacity	Pollution Control Device (PCD)	PCD-ID	Pollutant Controlled	Exhaust ID	Applicable Permit Date
EP-D30	Cleanup Conveyor Dump from Main Press					EP-D30	7/17/2002
PF-3A	Pressline Trim Saws (1965)	1.1 tons trim/hr	Clarke Model 1-40-20 fabric filter baghouse and a maximum system air movement capacity of 27306 ACFM.	C14	PT	EP-PF-3	7/17/2002
PF-3B	Jenkins T&E Saw (1964)	1.1 tons trim/hr					
PF-4	Board Cooler (1964)	17000 converted feet/hr, ¾ inch basis				EP-PF-4	7/17/2002
PF-5	Kimwood 6-head sander (1971)	6.2 tons of sanderdust/hr	Clarke Model 1-60-20 fabric filter baghouse with a design control efficiency of 99.9% and a maximum system air movement capacity of 37981 ACFM	C15	PT	EP-PF-5A	7/17/2002
			Clarke Model 1-60-20 fabric filter baghouse with a design control efficiency of 99.9% and a maximum system air movement capacity of 38972 ACFM.	C16	PT	EP-PF-5B	7/17/2002
PF-6	Dryer Sanderdust collection system and bin(1975)	3.5 tons/hr	Clarke Model 1-15-20 fabric filter baghouse with a maximum system air movement capacity of 11160 ACFM.	C17	PT	EP-PF-6	7/17/2002
EP-D26	Overs pile from sanderdust screen					EP-D26	7/17/2002
EP-D27	Overflow drop from sanderdust bin					EP-D27	7/17/2002
PF-7A	IMC Saw (1969)	0.72 tons trim/hr	Clarke Model 1-40-20 fabric filter baghouse with a maximum system air movement capacity of 24344 ACFM.	C18	PT	EP-PF-7	7/17/2002
PF-7B	Board Breaker (1996)	0.05 tons/hr					7/17/2002

EMISSIONS INVENTORY

A copy of the 2001CEDS summary report is attached. Emissions are summarized in the following tables.

2001 Criteria Pollutant Emission in Tons/Year				
VOC	CO	SO_2	PM_{10}	NO_x
229	43	5	143	158

Pollutant	2001 Hazardous Air Pollutant Emission in Tons/Yr
Acetaldehyde	4 tpy
Acrolein	1 tpy
Formaldehyde	26 tpy
Methanol	36 tpy
Phenol	2 tpy
Propionaldehyde	>1 tpy

APPLICABLE REQUIREMENTS

Limitations

The following list of limitations originates from the July 17, 2002 state operating permit. This permit contains limitations designed to keep the facility a synthetic minor for PSD purposes, limiting the potential to emit of all point source emissions to less than 250 tpy of each criteria pollutant.

#3 **Emission Controls** - Particulate emissions from the Keeler boiler (B-1) shall be controlled by a Joy multicyclone centrifugal collector Model Number 9 VM 10 18-3 (C01) with a minimum control efficiency of 78%. The multicyclone shall be provided with adequate access for inspection and shall be in operation when the Keeler boiler (B-1) is operating.
(9 VAC 5-80-850, 9 VAC 5-50-260)

#4 **Emission Controls** - Particulate emissions from the McConnell burner (FS-1B) and the face pre-dryer (FS-1A) shall be controlled by a General Sheet Metal cyclone (C02). The cyclone shall be provided with adequate access for inspection and shall be in operation when the McConnell burner (FS-1B) or the face pre-dryer (FS-1A) is operating.
(9 VAC 5-80-850)

#5 **Emission Controls** - Particulate emissions from the face final dryer (FS-2) shall be controlled by a Bruning and Federle cyclone (C03). The cyclone shall be provided with adequate access for inspection and shall be in operation when the face final dryer (FS-2) is operating.
(9 VAC 5-80-850)

#6 **Emission Controls** - Particulate emissions from the exhausts of the accepts aspirator (FS-3B) and the fines aspirator (FS-3C) shall be controlled by a baghouse (C04) with a maximum exhaust grain loading of 0.01 gr/dscft and a maximum system air movement capacity of 14000 ACFM. The baghouse (C04) shall be provided with adequate access for inspection and shall be in operation when each process is operating.
(9 VAC 5-80-850, 9 VAC 5-50-260)

#7 **Emission Controls** – Fugitive particulate emissions from the collection and transferring of collected wood shaving and sawdust from the accepts aspirator (FS-3B) and the fines aspirator (FS-3C) shall be controlled by:

a. Rotary air lock from the collector to an enclosed bin;
b. Covering of the conveyors identified as follows: EU-ID's 5, 5A, 5B, 5C, 5D, 8, 8A, 36, 37, 38, and 39; and
c. Complete enclosure.

(9 VAC 5-80-850, VAC 5-50-260)

#8 **Emission Controls** – Particulate emissions from the trim recovery bin (FS-4) shall be controlled by an Aerodyne Model 1600 SV 560 CR cyclone (C05). The cyclone (C05) shall be provided with adequate access for inspection and shall be in operation when the face system is receiving material from the trim recovery bin (FS-4).
(9 VAC 5-80-850)

#9 **Emission Controls** – Particulate emissions from the Pallman face refiners 1, 2, and 3 (FS-5A, FS-5B, and FS-5C) shall be controlled by a Clarke Model 1-60-20 fabric filter baghouse (C06) with a maximum exhaust grain loading of 0.003 gr/dscft and with a maximum system air movement capacity of 41908 ACFM. The baghouse (C06) shall be provided with adequate access for inspection and shall be in operation when the Pallman face refiners (FS-5A, FS-5B, and FS-5C) are in operation.
(9 VAC 5-80-850)

#10 **Emission Controls** - Particulate emissions from the shaker screens 1 through 3 (CS-4A, CS-4B, and CS-4C) shall be controlled by a Pneumafil RAF fabric filter baghouse (C09) with a maximum exhaust grain loading of 0.003 gr/dscft and a maximum system air movement capacity of 44608 ACFM. The baghouse (C09) shall be provided with adequate access for inspection and shall be in operation when the shaker screens 1 through 3 (CS-4A, CS-4B, and CS-4C) are operating.
(9 VAC 5-80-850)

#11 **Emission Controls** - Particulate emissions from the shaker screens 4 and 5 (CS-5A and CS-5B) shall be controlled by a Pneumafil RAF fabric filter baghouse (C10) with a maximum exhaust grain loading of 0.003 gr/dscft and a maximum system air movement capacity of 39384 ACFM. The baghouse (C10) shall be provided with adequate access for inspection and shall be in operation when the shaker screens 4 and 5 (CS-5A and CS-5B) are operating.
(9 VAC 5-80-850)

#12 **Emission Controls** - Particulate emissions from the Bauer refiners 1 through 4 (CS-6A, CS-6B, CS-6C, and CS-6D) shall be controlled by a Clarke Model 1-40-20 fabric filter baghouse (C11) with a maximum exhaust grain loading of 0.003 gr/dscft and a maximum system air movement capacity of 24344 ACFM. The baghouse (C11) shall be provided with adequate access for inspection and shall be in operation when the Bauer refiners 1 through 4 (CS-6A, CS-6B, CS-6C, and CS-6D) are operating.
(9 VAC 5-80-850)

#13 **Emission Controls** - Particulate emissions from the Bauer refiners 5 and 6 (CS-7A and CS-7B) shall be controlled by a Clarke Model 1-40-20 fabric filter baghouse (C12) with a maximum exhaust grain loading of 0.003 gr/dscft and a maximum system air movement capacity of 24344 ACFM. The baghouse (C12) shall be provided with adequate access for inspection and shall be in operation when the Bauer refiners 5 and 6 (CS-7A and CS-7B) are operating.
(9 VAC 5-80-850)

#14 **Emission Controls** – Particulate emissions from the core pre-dryer (CS-1) shall be controlled by a General Sheet Metal cyclone (C07). The cyclone (C07) shall be provided with adequate access for inspection and shall be in operation when the core pre-dryer (CS-1) is operating.
(9 VAC 5-80-850)

#15 **Emission Controls** – Particulate emissions from the core final dryer (CS-2) shall be controlled by Fisher-Klosterman High Efficiency cyclone (C08). The cyclone (C08) shall be provided with adequate access for inspection and shall be in operation when the core final dryer (CS-2) is operating.
(9 VAC 5-80-850)

#16 **Emission Controls** – Particulate emissions from the production line reclaim (PF-1) shall be controlled by a Clarke Model 1-60-20 fabric filter baghouse (C13) with a maximum exhaust grain loading of 0.003 gr/dscft and a maximum system air movement capacity of 41408 ACFM. The baghouse (C13) shall be provided with adequate access for inspection and shall be in operation when the production line reclaim (PF-1) is operating.
(9 VAC 5-80-850)

#17 **Emission Controls** – Particulate emissions from the pressline trim saws (PF-3A) and the Jenkins T&E saw (PF-3B) shall be controlled by a Clarke Model 1-40-20 fabric filter baghouse (C14) with a maximum exhaust grain loading of 0.003 gr/dscft and a maximum system air movement capacity of 27306 ACFM. The baghouse (C14) shall be provided with adequate access for inspection and shall be in operation when the processes (PF-3A or PF-3B) are operating.
(9 VAC 5-80-850)

#18 **Emission Controls** – Particulate emissions from the Kimwood 6-head sander (PF-5) shall be controlled by two Clarke Model 1-60-20 fabric filter baghouses (C15 and C16). Each baghouse shall have a minimum particulate control efficiency of 99.9%, and each shall have a maximum exhaust grain loading of 0.003 gr/dscft. The baghouse identified as C15 shall have a maximum system air movement capacity of 37981 ACFM. The baghouse identified as C16 shall have a maximum system air movement capacity of 38972 ACFM. The baghouses (C15 and C16) shall be provided with adequate access for inspection and shall be in operation when the sander (PF-5) is operating.
(9 VAC 5-80-850)

#19 **Emission Controls** – Particulate emissions from the dryer sanderdust collection system and bin (PF-6) shall be controlled by a Clarke Model 1-15-20 fabric filter baghouse (C17) with a maximum exhaust grain loading of 0.003 gr/dscft and a maximum system air movement capacity of 11160 ACFM. The baghouse (C17) shall be provided with adequate access for inspection and shall be in operation when the collection system (PF-6) is operating.
(9 VAC 5-80-850)

#20 **Emission Controls** – Particulate emissions from the IMC saw (PF-7A) and the board breaker (PF-7B) shall be controlled by a Clarke Model 1-40-20 fabric filter baghouse (C18) with a maximum exhaust grain loading of 0.003 gr/dscft and a maximum system air movement capacity of 24344 ACFM. The baghouse (C18) shall be provided with adequate access for inspection and shall be in operation when the IMC saw (PF-7A) or the board breaker (PF-7B) is operating.
(9 VAC 5-80-850, 9 VAC 5-50-260)

#24 **Fuel** - The approved fuel for the Ames boiler (B-3) and the Cleaver Brooks boiler (B-2) is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850)

#25 **Fuel Throughput** - The Ames boiler (B-3) and the Cleaver Brooks boiler (B-2) shall consume no more than 10×10^6 cubic feet of natural gas per year combined, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-850)

#26 **Fuel** - The approved fuels for the Keeler boiler (B-1) are distillate oil and wood sander dust. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-850, 9 VAC 5-50-260)

#27 **Fuel Throughput** - The Keeler boiler (B-1) shall consume annually no more than the quantities of fuel that satisfy the following equation:

$X*(140{,}000 \text{ btu/gal}) + Y*(16{,}000{,}000 \text{ btu/ton}) \leq 153{,}600 \times 10^6$ btu's/year

Where: X = annual consumption of distillate oil, in gallons
Y = annual consumption of wood sander dust, in tons

Annual consumption of each type of fuel shall be calculated monthly as sum of the previous consecutive 12 month period. Compliance with the above formula shall be determined and recorded monthly.
(9 VAC 5-80-850, 9 VAC 5-50-260)

#28 **Operating Hours** - The core pre-dryer (CS-1) shall not operate more than 7900 hours per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-850)

#29 **Fuel** - The approved fuels for the core pre-dryer supplemental heater (CS-1) are distillate oil and natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850)

#30 **Fuel Throughput** - The core pre-dryer supplemental heater (CS-1) shall consume annually no more than the quantities of fuel that satisfy the following equation:

$X*(140{,}000 \text{ btu/gal}) + Y*(1000 \text{ btu/cft}) \leq 20{,}000 \times 10^6$ btu's/year

Where: X = annual consumption of distillate oil, in gallons
Y = annual consumption of natural gas, in cubic feet

Annual consumption of each type of fuel shall be calculated monthly as sum of the previous consecutive 12 month period. Compliance with the above formula shall be determined and recorded monthly.
(9 VAC 5-80-850)

#31 **Fuel** - The approved fuels for the core final dryer supplemental heater (CS-2) are distillate oil and natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850)

#32 **Fuel Throughput** - The core final dryer supplemental heater (CS-2) shall consume annually no more than the quantities of fuel that satisfy the following equation:

$X*(140{,}000 \text{ btu/gal}) + Y*(1000 \text{ btu/cft}) \leq 20{,}000 \times 10^6$ btu's/year

Where: X = annual consumption of distillate oil, in gallons
Y = annual consumption of natural gas, in cubic feet

Annual consumption of each type of fuel shall be calculated monthly as sum of the previous consecutive 12 month period. Compliance with the above formula shall be determined and recorded monthly.
(9 VAC 5-80-850)

#33 **Throughput** - The output of wood furnish from the core final dryer (CS-2) shall not exceed 90,000 actual tons per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-850)

#34 **Operating Hours** - The face pre-dryer (FS-1A) shall not operate more than 7900 hours per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-850)

#35 **Fuel** - The approved fuels for the face pre-dryer supplemental heater (FS-1A) are distillate oil and natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850)

#36 **Fuel Throughput** - The face pre-dryer supplemental heater (FS-1A) shall consume annually no more than the quantities of fuel that satisfy the following equation:

$X*(140{,}000 \text{ btu/gal}) + Y*(1000 \text{ btu/cft}) \leq 75{,}000 \times 10^6$ btu's/year

Where: X = annual consumption of distillate oil, in gallons
Y = annual consumption of natural gas, in cubic feet

Annual consumption of each type of fuel shall be calculated monthly as sum of the previous consecutive 12 month period. Compliance with the above formula shall be determined and recorded monthly.
(9 VAC 5-80-850)

#37 **Fuel** - The approved fuels for the face final dryer (FS-2) are distillate oil and natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850)

#38 **Fuel Throughput** – The face final dryer (FS-2) shall consume annually no more than the quantities of fuel that satisfy the following equation:

$X*(140{,}000 \text{ btu/gal}) + Y*(1000 \text{ btu/cft}) \leq 65{,}000 \times 10^6$ btu's/year

Where: X = annual consumption of distillate oil, in gallons
Y = annual consumption of natural gas, in cubic feet

Annual consumption of each type of fuel shall be calculated monthly as sum of the previous consecutive 12 month period. Compliance with the above formula shall be determined and recorded monthly.
(9 VAC 5-80-850)

#39 **Throughput** - The output of wood furnish from the face final dryer (FS-2) shall not exceed 74,000 actual tons per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-850)

#40 **Fuel** - The approved fuel for the McConnell burner (FS-1B) and the Energex burner (CS-3) is wood sander dust. The McConnell burner (FS-1B) and the Energex burner (CS-3) may also use natural gas as a startup fuel. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-850, 9 VAC 5-50-260)

#41 **Fuel Throughput** - The McConnell burner (FS-1B) shall consume no more than 4,428 tons of wood sander dust per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-850, 9 VAC 5-50-260)

#42 **Fuel Throughput** - The Energex burner (CS-3) shall consume no more than 10,000 tons of wood sander dust per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-850)

#43 **Production** - The production of particleboard from the press (PF-2) shall not exceed 111,300,000 square feet per year, on a ¾ inch basis, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-850)

#44 **Fuel** - The distillate oil and natural gas shall meet the specifications below:

DISTILLATE OIL which meets the ASTM D396 specification for numbers 1 or 2 fuel oil:
Maximum sulfur content per shipment: 0.2%

NATURAL GAS:
Minimum heat content: 900 Btu/cf HHV.

(9 VAC 5-80-850)

#45 **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:

a. The name of the fuel supplier;

b. The date on which the distillate oil was received;

c. The volume of distillate oil delivered in the shipment;

d. A statement that the distillate oil complies with the American Society for Testing and Materials specifications for numbers 1 or 2 fuel oil,

e. The sulfur content of the distillate oil.
(9 VAC 5-80-850)

#46 **Emission Limits** – Hourly emissions from the operation of the Ames boiler (B-3) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-B-1.

Nitrogen Oxides (as NO_2) 0.5 lbs/hr
(9 VAC 5-80-850)

#47 **Emission Limits** – Hourly emissions from the operation of the Cleaver Brooks (B-2) boiler shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-B-2.

Nitrogen Oxides (as NO_2)	1.0 lbs/hr
Carbon Monoxide (9 VAC 5-80-850)	0.9 lbs/hr

#48 **Emission Limits** – Combined annual emissions from the Ames boiler (B-3) and the Cleaver Brooks boiler (B-2) shall not exceed the limitations specified below:

Nitrogen Oxides (as NO_2)	0.5 tons/yr
Carbon Monoxide (9 VAC 5-80-850)	0.4 tons/yr

#49 **Emission Limits** – Emissions from the operation of the Keeler boiler (B-1) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-B-1.

Particulate Matter	8.0 lbs/hr	23.2 tons/yr
PM-10	8.0 lbs/hr	23.2 tons/yr
Sulfur Dioxide	4.7 lbs/hr	15.6 tons/yr
Nitrogen Oxides (as NO_2)	15.5 lbs/hr	44.7 tons/yr
Carbon Monoxide	38.7 lbs/hr	111.9 tons/yr
Volatile Organic Compounds (9 VAC 5-80-850)	1.0 lbs/hr	2.9 tons/yr

#50 **Emission Limits** – Combined emissions from the operation of the core pre dryer (CS-1), the core final dryer (CS-2), and the Energex burner (CS-3) shall not exceed the limits specified below. These emissions shall be measured at the stacks identified as EP-CS-1, EP-CS-2, and EP-CS-3.

Particulate Matter	24.2 lbs/hr	71.9 tons/yr
PM-10	22.8 lbs/hr	68.6 tons/yr
Sulfur Dioxide	10.8 lbs/hr	6.1 tons/yr
Nitrogen Oxides (as NO_2)	41.8 lbs/hr	103.4 tons/yr

Carbon Monoxide	14.1 lbs/hr	30.5 tons/yr
Volatile Organic Compounds (9 VAC 5-80-850)	13.6 lbs/hr	36.9 tons/yr

#51 **Emission Limits** – Combined emissions from the operation of the McConnell burner (FS-1B) and the face pre-dryer (FS-1A) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-FS-1.

Particulate Matter	6.8 lbs/hr	27.0 tons/yr
PM-10	6.8 lbs/hr	27.0 tons/yr
Sulfur Dioxide	5.8 lbs/hr	8.5 tons/yr
Nitrogen Oxides (as NO_2)	61.0 lbs/hr	78.0 tons/yr
Carbon Monoxide	12.2 lbs/hr	15.9 tons/yr
Volatile Organic Compounds (9 VAC 5-80-850, 9 VAC 5-50-260)	17.5 lbs/hr	69.1 tons/yr

#52 **Emission Limits** – Emissions from the operation of the face final dryer (FS-2) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-FS-2.

Particulate Matter	10.0 lbs/hr	42.5 tons/yr
PM-10	9.8 lbs/hr	42.3 tons/yr
Sulfur Dioxide	5.1 lbs/hr	6.6 tons/yr
Nitrogen Oxides (as NO_2)	3.6 lbs/hr	4.6 tons/yr
Carbon Monoxide	2.1 lbs/hr	2.7 tons/yr
Volatile Organic Compounds (9 VAC 5-80-850)	9.2 lbs/hr	18.3 tons/yr

#53 **Emission Limits** – Combined emissions from the operation of the press (PF-2) shall not exceed the limits specified below. These emissions shall be measured at the stacks identified as EP-PF-2A and EP-PF-2B.

Particulate Matter	0.7 lbs/hr	1.7 tons/yr
PM-10	0.7 lbs/hr	1.7 tons/yr
Volatile Organic Compounds (9 VAC 5-80-850)	42.0 lbs/hr	97.4 tons/yr

#54 **Emission Limits** – Emissions from the operation of the board cooler (PF-4) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-PF-4.

Particulate Matter	0.3 lbs/hr	0.8 tons/yr
PM-10	0.3 lbs/hr	0.8 tons/yr
Volatile Organic Compounds (9 VAC 5-80-850)	9.1 lbs/hr	21.0 tons/yr

#55 **Emission Limits** – Combined emissions from the operation of the sander (PF-5) shall not exceed the limits specified below. These emissions shall be measured at the stacks identified as EP-PF-5A and EP-PF-5B.

Particulate Matter	0.003 gr/dscft	2.0 lbs/hr	8.7 tons/yr
PM-10 (9 VAC 5-80-850)	0.003 gr/dscft	2.0 lbs/hr	8.7 tons/yr

#56 **Emission Limits** – Emissions from the operation of the trim recovery bin (FS-4) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-FS-4.

Particulate Matter	0.4 lbs/hr	1.8 tons/yr
PM-10 (9 VAC 5-80-850)	0.4 lbs/hr	1.8 tons/yr

#57 **Emission Limits** – Combined emissions from the operation of the hog (FS-3A), the accepts aspirator (FS-3B), and the fines aspirator (FS-3C) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-FS-3.

Particulate Matter	0.01 gr/dscft	1.2 lbs/hr	5.3 tons/yr
PM-10	0.01 gr/dscft	1.2 lbs/hr	5.3 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#58 **Emission Limits** – Combined emissions from the operation of Bauer refiners 1 through 4 (CS-6A, CS-6B, CS-6C, and CS-6D) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-CS-6.

Particulate Matter	0.003 gr/dscft	0.6 lbs/hr	2.7 tons/yr
PM-10	0.003 gr/dscft	0.6 lbs/hr	2.7 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#59 **Emission Limits** – Combined emissions from the operation of Bauer refiners 5 and 6 (CS-7A and CS-7B) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-CS-7.

Particulate Matter	0.003 gr/dscft	0.6 lbs/hr	2.7 tons/yr
PM-10	0.003 gr/dscft	0.6 lbs/hr	2.7 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#60 **Emission Limits** – Combined emissions from the operation of shaker screens 1, 2, and 3 (CS-4A, CS-4B, and CS-4C) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-CS-4.

Particulate Matter	0.003 gr/dscft	1.1 lbs/hr	5.0 tons/yr
PM-10	0.003 gr/dscft	1.1 lbs/hr	5.0 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#61 **Emission Limits** – Combined emissions from the operation of shaker screens 4 and 5 (CS-5A and CS-5B) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-CS-5.

Particulate Matter	0.003 gr/dscft	1.0 lbs/hr	4.4 tons/yr
PM-10	0.003 gr/dscft	1.0 lbs/hr	4.4 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#62 **Emission Limits** – Combined emissions from the operation of the pressline trim saws (PF-3A) and the Jenkins T&E saw (PF-3B) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-PF-3.

Particulate Matter	0.003 gr/dscft	0.7 lbs/hr	3.1 tons/yr

PM-10	0.003 gr/dscft	0.7 lbs/hr	3.1 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#63 **Emission Limits** – Emissions from the operation of the dryer sanderdust fuel collection system (PF-6) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-PF-6.

Particulate Matter	0.003 gr/dscft	0.3 lbs/hr	1.3 tons/yr
PM-10	0.003 gr/dscft	0.3 lbs/hr	1.3 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#64 **Emission Limits** – Combined emissions from the operation of Pallman refiners 1, 2, and 3 (FS-5A, FS-5B, FS-5C) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-FS-5.

Particulate Matter	0.003 gr/dscft	1.1 lbs/hr	4.7 tons/yr
PM-10	0.003 gr/dscft	1.1 lbs/hr	4.7 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#65 **Emission Limits** – Emissions from the operation of the production line air handling system (PF-1) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-PF-1.

Particulate Matter	0.003 gr/dscft	1.1 lbs/hr	4.7 tons/yr
PM-10	0.003 gr/dscft	1.1 lbs/hr	4.7 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#66 **Emission Limits** – Combined emissions from the operation of the IMC saw (PF-7A) and the board breaker (PF-7B) shall not exceed the limits specified below. These emissions shall be measured at the stack identified as EP-PF-7.

Particulate Matter	0.003 gr/dscft	0.6 lbs/hr	2.7 tons/yr
PM-10	0.003 gr/dscft	0.6 lbs/hr	2.7 tons/yr

(9 VAC 5-80-850, 9 VAC 5-50-260)

#67 **Plantwide Emission Limits** - Total point source emissions from entire facility shall not exceed the limits specified below:

Particulate Matter	214.9 tons/yr
PM-10	211.4 tons/yr
Sulfur Dioxide	36.7 tons/yr
Nitrogen Oxides (as NO_2)	231.7 tons/yr

Carbon Monoxide	162.0 tons/yr
Volatile Organic Compounds	245.7 tons/yr

(9 VAC 5-80-850)

#68 **Visible Emission Limit** - Visible emissions from the control devices listed below controlling emissions from the equipment listed below shall not exceed 5 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

EU-ID	EU Description	PCP ID	Exhaust ID
FS-3A FS-3B FS-3C	Hog Accepts Aspirator Fines Aspirator	C04	EP-FS-3
FS-5A FS-5B FS-5C	Pallman face refiners 1, 2, and 3	C06	EP-FS-5
CS-4A CS-4B CS-4C	Shaker screens 1, 2, and 3	C09	EP-CS-4
CS-5A CS-5B	Shaker screens 4 and 5	C10	EP-CS-5
CS-6A CS-6B CS-6C CS-6D	Bauer refiners 1 through 4	C11	EP-CS-6
CS-7A CS-7B	Bauer refiners 5 and 6	C12	EP-CS-7
PF-1	Production line air handling	C13	EP-PF-1
PF-3A PF-3B	Pressline trim saws Jenkins T&E saw	C14	EP-PF-3
PF-5	Kimwood 6-head sander	C15 C16	EP-PF-5A EP-PF-5B
PF-6	Dryer sanderdust collection system and bin	C17	EP-PF-6
PF-7A PF-7B	IMC saw Board breaker	C18	EP-PF-7

(9 VAC 5-80-850, 9 VAC 5-50-260)

#69 **Visible Emission Limit** - Visible emissions from any fugitive emission point associated with the accepts aspirator (FS-3B) and the fines aspirator (FS-3C) shall not exceed 10 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-850, 9 VAC 5-50-260)

#70 **Visible Emission Limit** - Visible emissions from the exhaust point (EP-FS-1) of the McConnell burner (FS-1B) shall not exceed 20% percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-850, 9 VAC 5-50-20, 9 VAC 5-50-260)

#89 **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-80-860 D)

The following requirement was imposed upon FS-4, the trim recovery bin, and its control equipment, cyclone C05, as part of the periodic monitoring plan for this facility. Emissions from cyclone C05 should never exceed 10% opacity to ensure compliance with the hourly and annual emissions limitations upon this unit. This requirement, along with adequate monitoring, record keeping, recording, and testing requirements associated with the opacity limitation, have been included in the Title V permit.

The following list of applicable requirements originates from 9 VAC 5 Chapter 40 Part II Article 4, "Emission Standards for General Process Operations."

9 VAC 5-40-250 Definitions

"Combustion installation" means all combustion units within a stationary source in operation prior to October 5, 1979.

"Combustion unit" means any type of stationary equipment in which solid, liquid, or gaseous fuels are burned, including, but not limited to, furnaces, ovens, and kilns.

9 VAC 5-40-280 b. Sulfur dioxide – combustion installations

No owner or other person shall cause or permit to be discharged into the atmosphere from any combustion installation any sulfur dioxide emissions in excess of the following limits:

S=2.64 K Where S=Allowable emission of sulfur dioxide expressed in lbs/hr
K=actual heat input at total capacity expressed in btu x 10^6 per hour

This limitation applies to the following equipment:

FS1A	Face system pre dryer	25mmbtu/hr natural gas 25 mmbtu/hr #2

FS2 Face system final dryer 25 mmbtu/hr natural gas
25 mmbtu/hr #2

CS1 Core system pre dryer 25 mmbtu/hr natural gas
25 mmbtu/hr #2

CS2 Core system final dryer 25 mmbtu/hr natural gas
25 mmbtu/hr #2

CS-3 Energex Wood Dust burner 27.55 mmbtu/hr sanderdust

This limitation does not apply to the FS-1B face system McConnell sander dust burner, which contributes heat to the face system pre dryer. The McConnell burner was installed in 1980, and therefore is not subject to this regulation.

Therefore, K in this instance is 227.55 mmbtu/hr, which makes S=**600.7 lbs/hr of SO2**.

The following list of applicable requirements originates from 9 VAC 5 Chapter 40 Part II Article 8, "Emission Standards for Fuel Burning Equipment."

This regulation applies to fuel burning equipment, which is defined as equipment used in the process of "…burning fuel for the primary purpose of producing heat to be utilized by indirect heat transfer or by indirect production of power." Therefore, the following equipment has this regulation has an applicable requirement.

EUID	Equipment Description	Heat Input Capacity	Control Device	Pollutant Controlled	CDID	Exhaust ID	Permit Date
B-1	Keeler Boiler(1977)	26.54 mmbtu/hr sanderdust 23 mmbtu/hr #2 oil	Joy multicyclone centrifugal collector 9VM10, 18-3 with a control efficiency of 78% for PT	PT	CO1	EP-B-1	7/17/2002

The Ames boiler, B-3, is exempt from this regulation since it burns natural gas only and has a capacity of less than 10 mmbtu/hr. The Cleaver Brooks boiler, B-2, is exempt from this regulation since it was constructed after 1979.

The following excerpts show the applicable requirements for this equipment from this regulation.

9 VAC 5-40-900 A.1.b.

For fuel burning equipment installations with a total capacity between 10 million and 10 billion btu per hour, the maximum allowable emission ratio, E, in pounds of particulate per million btu input, shall be determined by the following equation: $E=1.0906H^{-0.2594}$, where H is the total capacity in millions of btu per hour.

In this case, H=26.54, and therefore **E=0.47 lbs particulate/mmbtu**

9 VAC 5-40-900 B.1.

The maximum allowable particulate emissions for each fuel burning equipment unit shall be the product of the rated capacity and the emission ratio.

Therefore, the maximum allowable particulate emissions for each piece of equipment is as follows:

EUID	Equipment Description	Heat Input Capacity	lbs PT/hour
B-1	Keeler Boiler(1977)	26.54 mmbtu/hr sanderdust	**12.5 lbs pt/hr**

9 VAC 5-40-900 B.2.

The allowable particulate emissions for each fuel burning equipment unit when operating at less than rated capacity shall be the product of the emission ratio, actual heat input, and efficiency factor for the collection equipment. The efficiency factor for the collection equipment of each unit shall be determined using procedures set forth in 9 VAC 5-40-920.

9 VAC 5-40-920

The efficiency factor for the collection equipment shall be established as follows:

1. For all collection equipment except mechanical collectors, the efficiency factor shall be 1.0.
2. For mechanical collectors, the efficiency factor shall be the quotient of the design efficiency of the collector at rated capacity and the actual efficiency of the collector at the reduced actual load. The actual efficiency shall be the product of the design efficiency and the correction factor where:

   Correction Factor = $(1+\log_{10}(\text{actual load}))/(1+\log_{10}(\text{rated capacity}))$

3. For collection equipment where the owner does not wish to accept the efficiency factor established by subsection A or B of this section, the owner may provide information and data as a substitute. Such information and data may be emissions tests results or other conclusive evidence. If such information and data is found acceptable by the board, it may be used to establish the efficiency factor for the collection equipment.

In this situation, the Keeler boiler, B-1, is controlled by a Joy multicyclone with a manufacturer's guarantee of 90+% efficiency at maximum rated capacity and an average efficiency of 78%. Therefore, the

correction factor will be considered to be 1 since the 78% control efficiency should apply throughout the entire range of boiler operations.

9 VAC 5-40-930 A. 1.

No owner or other person shall cause or permit to be discharged into the atmosphere from any fuel burning equipment installation any sulfur dioxide emissions in excess of the following limits: S=2.65K where S=allowable emission of sulfur dioxide expressed in pounds per hour and where K=heat input at total capacity expressed in million btu per hour.

EUID	Equipment Description	Heat Input Capacity
B-1	Keeler Boiler(1977)	26.54 mmbtu/hr sanderdust

Therefore, K=26.54 so that **S=70.3 lbs SO2/hr**.

9 VAC 5-40-930 B.

Where there is one or more units in a fuel burning equipment installation and where the installation can be shown, to the satisfaction of the board, to be in compliance when the installation is operating at total capacity, the installation will be deemed to still be in compliance when the installation is operated at reduced load or one or more units are shut down for maintenance or repair, provided that the same type of fuel with the same sulfur content, or an equivalent, is continued in use.

9 VAC 5-40-940

No owner or other person shall cause or permit to be discharged into the atmosphere from any fuel burning equipment unit any visible emissions which exhibit greater than 20% opacity, except for one six minute period in any one hour of not more than 60% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.

This opacity requirement applies specifically to B1 since B2 was built after 1979 and B3 is less than 10 mmbtu burning only natural gas.

The following list of applicable requirements originates from 9 VAC 5 Chapter 40 Part II Article 17, “Emission Standards for Wood Working Operations.”

9 VAC 5-40-2270 A.

No owner or other person shall cause or permit to be discharged into the atmosphere any particulate emissions caused by an woodworking operation without providing, as a minimum for their collection, adequate duct work and properly designed collectors, or such other devices, as approved by the board.
9 VAC 5-40-2270 B.

Particulate emissions shall not exceed 0.05 grains per standard cubic feet of exhaust gas.

The above two paragraphs are applicable requirements for any "wood working" operation. Such an operation is defined as "…any operation involving the generation of small wood waste particles (shavings, sander dust, sawdust, etc) by any kind of mechanical manipulation of wood, bark, or wood byproducts. Includes but is not limited to, sawing, planing, chipping, shaping, moulding, hogging, lathing, and sanding. Also includes any wood working waste collection operation." Therefore, this standard applies to the following equipment and exhausts.

EU-ID	EU Description	PCP ID	Exhaust ID
FS-3A FS-3B FS-3C	Hog Accepts Aspirator Fines Aspirator	C04	EP-FS-3
FS-5A FS-5B FS-5C	Pallman face refiners 1, 2, and 3	C06	EP-FS-5
CS-4A CS-4B CS-4C	Shaker screens 1, 2, and 3	C09	EP-CS-4
CS-5A CS-5B	Shaker screens 4 and 5	C10	EP-CS-5
CS-6A CS-6B CS-6C CS-6D	Bauer refiners 1 through 4	C11	EP-CS-6
CS-7A CS-7B	Bauer refiners 5 and 6	C12	EP-CS-7
PF-1	Production line air handling	C13	EP-PF-1
PF-3A PF-3B	Pressline trim saws Jenkins T&E saw	C14	EP-PF-3
PF-5	Kimwood 6-head sander	C15 C16	EP-PF-5A EP-PF-5B
PF-6	Dryer sanderdust collection system and bin	C17	EP-PF-6
PF-7A PF-7B	IMC saw Board breaker	C18	EP-PF-7

Monitoring

The following list of monitoring requirements originates from the July 17, 2002 state operating permit.

#21 **Monitoring Devices** - The following control equipment shall be equipped with devices to continuously measure the differential pressure drop across each fabric filter: C04, C06, C09, C10, C11, C12, C13, C14, C15, C16, C17, and C18. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the corresponding fabric filter is operating.
(9 VAC 5-80-850, 9 VAC 5-50-260)

#22 **Monitoring Device Observation** – The devices used to continuously measure the differential pressure drop across each baghouse, as required by Condition #21 shall be observed by the permittee with a frequency of not less than once per calendar week. The permittee shall keep a log of the weekly observations from each of the differential pressure drop devices.
(9 VAC 5-50-50 H, 9 VAC 5-80-850, 9 VAC 5-50-260)

#23 **Inspections of Control Devices** – The permittee shall perform an annual internal inspection on each of the following cyclones to insure structural integrity: C01, C02, C03, C05, C07, and C08. Dates, inspection results, and follow up maintenance and repair shall be recorded for each cyclone inspection.
(9 VAC 5-80-850, 9 VAC 5-50-260)

This Title V permit also contains the following monitoring requirements that stem from periodic monitoring requirements, as delineated in the section below entitled “Periodic Monitoring.”

- For baghouse C04, the permittee shall check monthly for visible emissions while the aspirators (FS-3B, 3C) and hog (FS-3A) are operating. If any emissions are seen, the permittee shall do a Method 9 examination to determine opacity.

- For the accepts aspirator (FS-3B) and the fines aspirator (FS-3C), the permittee shall check for the presence of fugitive emissions monthly. If any are noted, the permittee shall perform a Method 9 to determine the fugitive emission opacity.

- For baghouses C06, C09, C10, C11, C12, C13, C14, C15, C16, C17, and C18, the permittee shall check monthly for visible emissions while the equipment being controlled is operating. If any emissions are seen, the permittee shall do a Method 9 examination to determine opacity.

- For cyclone C05, the permittee shall check monthly for visible emissions while the trim recovery bin FS-4 is operating. If any emissions are seen, the permittee shall do a Method 9 examination to determine opacity.

- For the cyclone C02, the permittee shall check monthly for visible emissions while the McConnell burner FS-1B is operating. If any emissions are seen, the permittee shall do a Method 9 examination to determine the opacity. It is expected that since this unit has significant water vapor emissions, a Method 9 will have to be performed at every inspection to determine compliance. Due to this expected testing load, this unit's periodic monitoring has been changed from weekly to monthly.

- For the cyclone C01, the permittee shall check monthly for visible emissions while the Keeler boiler is operating. If any emissions are seen, the permittee shall do a Method 9 examination to determine the opacity.

Record Keeping

The following list of record keeping requirements originates from the July 17, 2002 state operating permit.

#80 **On Site Records -** The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to:

a. Results of all stack tests, visible emission evaluations and performance evaluations.

b. Combined annual throughput of natural gas to the Ames boiler (B-3) and the Cleaver Brooks boiler (B-2), calculated monthly as the sum of each consecutive 12 month period

c. Annual throughput of distillate oil to the Keeler boiler (B-1), calculated monthly as the sum of each consecutive 12 month period

d. Annual throughput of wood sander dust to the Keeler boiler (B-1), calculated monthly as the sum of each consecutive 12 month period.

e. Monthly compliance demonstrations with fuel usage formula for the Keeler boiler (B-1) as listed in Condition27.

f. Annual hours of operation of the core pre-dryer (CS-1), calculated monthly as the sum of each consecutive 12 month period.

g. Annual throughput of distillate oil to the core pre-dryer (CS-1), calculated monthly as the sum of each consecutive 12 month period.

h. Annual throughput of natural gas to the core pre-dryer (CS-1), calculated monthly as the sum of each consecutive 12 month period.

i. Monthly compliance demonstrations with fuel usage formula for the core pre-dryer (CS-1) as listed in Condition 30.

j. Annual throughput of distillate oil to the core final dryer (CS-2), calculated monthly as the sum of each consecutive 12 month period.

k. Annual throughput of natural gas to the core final dryer (CS-2), calculated monthly as the sum of each consecutive 12 month period.

l. Annual output of wood furnish from the core final dryer (CS-2), calculated monthly as the sum of each consecutive 12 month period.

m. Monthly compliance demonstrations with fuel usage formula for the core final dryer (CS-2) as listed in Condition 32.

n. Annual hours of operation of the face pre-dryer (FS-1A), calculated monthly as the sum of each consecutive 12 month period.

o. Annual throughput of distillate oil to the face pre-dryer (FS-1A), calculated monthly as the sum of each consecutive 12 month period.

p. Annual throughput of natural gas to the face pre-dryer (FS-1A), calculated monthly as the sum of each consecutive 12 month period.

q. Monthly compliance demonstrations with fuel usage formula for the face pre-dryer (FS-1A) as listed in Condition 36.

r. Annual throughput of distillate oil to the face final dryer (FS-2), calculated monthly as the sum of each consecutive 12 month period.

s. Annual throughput of natural gas to the face final dryer (FS-2), calculated monthly as the sum of each consecutive 12 month period.

t. Annual output of wood furnish from the face final dryer (FS-2), calculated monthly as the sum of each consecutive 12 month period.

u. Monthly compliance demonstrations with fuel usage formula for the face final dryer (FS-2) as listed in Condition 38.

v. Annual throughput of wood sander dust to the McConnell burner (FS-1B), calculated monthly as the sum of each consecutive 12 month period.

w. Annual throughput of wood sander dust to the Energex burner (CS-3), calculated monthly as the sum of each consecutive 12 month period.

x. Annual production of particleboard from the press (PF-2), calculated monthly as the sum of each consecutive 12 month period.

y. All fuel supplier certifications.

z. Monthly emissions calculations for emissions of criteria pollutants from the particleboard manufacturing facility to verify compliance with the ton/yr emissions limitations in Condition 67. Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period.

aa. Differential pressure drop logs for all control equipment as required by Condition 22.

bb. Records of inspections performed for all control equipment as required by Condition 23.

cc. Scheduled and unscheduled maintenance, and operator training.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-900, 9 VAC 5-50-50)

This Title V permit also contains the following record keeping requirements that stem from periodic monitoring requirements.

- Times and dates when any required control device, such as a cyclone, baghouse, rotary air lock, or total enclosure, were not in use or inoperative.

- Times and dates of monthly visible emissions checks. Results of any Method 9 observations performed.

- Results of inspections required by the Title V permit, including testing required for periodic monitoring purposes.

- Emission calculations and corresponding AP 42 and NCASI emission factors, formulas, rated capacities, and/or maximum air flow capacities for the following equipment to support the emission limitation demonstrations used for periodic monitoring purposes:

EUID	Pollutant	Required Record Keeping
B1, Ames Boiler	all pollutants	AP-42 factors, boiler rated capacity, formulas annual emission calculations, fuel(s) used.
B2, Cleaver Brooks Boiler	all pollutants	AP-42 factors, boiler rated capacity, formulas annual emission calculations, fuel(s) used.
PF2, press	PT	NCASI emission factor, maximum capacities, formula, annual emission calculations
PF4, board cooler	PT	NCASI emission factor, maximum capacities, formula, annual emission calculations
B1,. Keeler boiler	SO2, VOC	AP-42 emission factors, maximum capacities, formula, annual emission calculations
Baghouses: C04, C06, C09, C10, C11, C12, C13, C14, C15, C16, C17, and C18	PT	grain loading requirement, maximum air flow capacity, formula, annual emission calculations

Testing

The following list of testing originates from the July 17, 2002 state operating permit.

#71 **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations.
(9 VAC 5-80-930, 9 VAC 5-50-30 F)

#72 **Stack Test for the Core System-** Initial performance tests shall be conducted for VOC, NO_x, CO, and particulate matter from the combined emissions of the core system exiting stacks EP-CS-1, EP-CS-2, EP-CS-3 to determine compliance with the emission limits contained in Condition #50. The tests shall be performed and reported within 180 days after initial issuance of this permit, April 8, 2002. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Director, Piedmont Region. The permittee shall submit a test protocol at least 60 days prior to testing. One copy of the test results shall be submitted to the Director, Piedmont Region within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-880)

#73 **Stack Test for the Face Pre-Dryer-** Initial performance tests shall be conducted for VOC, NO_x, CO, and particulate from the McConnell burner (FS-1B) and the face pre-dryer (FS-1A) at the exhaust identified as EP-FS-1 to determine compliance with the emission limits contained in Condition #51. The tests shall be performed and reported within 180 days after initial issuance of this permit, April 8, 2002. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Director, Piedmont Region. The permittee shall submit a test protocol at least 60 days prior to testing. One copy of the test results shall be submitted to the Director, Piedmont Region within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-880)

#74 **Stack Test for the Face Final Dryer-** Initial performance tests shall be conducted for VOC, NO_x, CO, and particulate from the face final dryer (FS-2) at the exhaust identified as EP-FS-2 to determine compliance with the emission limits contained in Condition #52. The tests shall be performed and reported within 180 days after initial issuance of this permit, April 8, 2002. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Director, Piedmont Region. The permittee shall submit a test protocol at least 60 days prior to testing. One copy of the test results shall be submitted to the Director, Piedmont Region within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-880)

#75 **Stack Test for the Press -** Initial performance tests shall be conducted for VOC from the press (PF-2) from exhausts identified as EP-PF-2A and EP-PF-2B to determine compliance with the emission limits contained in Condition #53. The tests shall be performed and reported within 180 days after initial issuance of this permit, April 8, 2002. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Director, Piedmont Region. The permittee shall submit a test protocol at least 60 days prior to testing. One copy of the test results shall be submitted to the Director, Piedmont Region within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-880)

#76 **Stack Test for the Board Cooler -** Initial performance tests shall be conducted for VOC from the board cooler (PF-4) from the exhaust identified as EP-PF-4 to determine compliance with the emission limits contained in Condition #54. The tests shall be performed and reported within 180 days after initial permit issuance, April 8, 2002. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Director, Piedmont Region. The permittee shall submit a test protocol at least 60 days prior to testing. One copy of the test results shall be submitted to the Director, Piedmont Region within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-880)

#77 **Stack Test for the Saws -** Initial performance tests shall be conducted for particulate from the Jenkins T&E saw (PF-3B) and the pressline trim saws (PF-3A) from the exhaust identified as EP-PF-3 to determine compliance with the emission limits contained in Condition #62. The tests shall be performed and reported within 180 days after initial permit issuance, April 8, 2002. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Director, Piedmont Region. The permittee shall submit a test protocol at least 60 days prior to testing. One copy of the test results shall be submitted to the Director, Piedmont Region within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-880)

#78 **Stack Test Protocol and Reporting Requirements –** As part of each testing protocol required in Conditions #72, #73, #74, #75, #76, and #77, the permittee shall submit target operating rates for each piece of equipment or operation being tested. In each testing protocol the permittee shall submit information concerning the effects of such operating rates on air emissions to the atmosphere. For units that may burn different fuels, the permittee shall also discuss in each testing protocol which fuels will be burned during each test to maximize emissions. The permittee shall make every reasonable effort to maximize air emissions during the testing required in Conditions #72, #73, #74, #75, #76, and #77. Additionally, test reports shall contain documentation showing type and amount of fuel being used during the test and the actual operating rate of each piece of equipment or operation being tested. In the test reports, the permittee shall compare this information to the targeted operating rates and fuels listed in each approved protocol.
(9 VAC 5-80-880)

The following testing requirements have been included in the Title V permit as part of the periodic monitoring plan for this facility:

- 1/permit term test for PT, PM10, NOx, and CO from the cyclone controlling B1 to show compliance with the emission limitations in the permit. These limitations were derived from test data and not AP-42 emission factors. Removal efficiency of PT/PM10 was not required to be tested due to the stack configuration on the inlet to the cyclone. The inlet to the cyclone will not meet duct requirements for Method 5 testing and also there is no way to make provisions in case of cyclonic flow. Due to the impracticality of testing the inlet particulate load, particulate removal efficiency testing was not included in the permit.

- 1/permit term testing for CO, NOx, PT, PM10, and VOC from the exhausts (EP-CS-1, EP-CS-2, and EP-CS-3) of the core dryer system, CS1, CS2, and CS3, to show compliance with the limitations in the permit.

- 1/permit term testing for CO, NOx, PT, PM10, and VOC from the exhaust (EP-FS-1) of the McConnell burner and face pre dryer system, FS1B and FS1A, to show compliance with the limitations of the permit.

- 1/permit term testing of CO, NOx, PT, PM10, and VOC from the exhaust (EP-FS-2) of the face final dryer (FS-2) to determine compliance with the limitations in the permit.

- 1/permit term, testing of VOC from the exhausts (EP-PF-2A and EP-PF-2B) of the press (PF-2) to determine compliance with the limitations in the permit.

A table of test methods has been included in the permit. The Department and EPA has authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. The boilerplate standard for this condition has been modified somewhat since some NCASI test methods are better suited for purposes of determining emissions for some pollutants than are the test methods in 40 CFR 60 Appendix A. Therefore, the terminology “or as otherwise approved by DEQ” has been added.

Reporting

The following reporting requirement originates in the 7/17/02 state operating permit.

#79 **Actions Upon Initial Testing Completion –** Within 120 days of completing the stack testing required in Conditions #72, #73, #74, #75, #76, and #77, the permittee shall submit a letter signed by a responsible official, as defined by 9 VAC 5-20-230, stating or requesting one of the following items:

a. The permittee may request that this state operating permit be terminated due to the fact that the facility is not able to achieve compliance with annual emission rate limitations as specified in Condition #67. Upon termination of this state operating permit, the facility will be subject to scrutiny under 9 VAC 5-80-1700 et seq as a major stationary source of air pollutant emissions. The letter shall supply details, including expenditure request information, of all physical changes in or changes in methods of operation that took place at the facility during the time period commencing with the initial issuance of this permit, April 8, 2002, and ending with the request for permit termination. After termination of this permit, previously issued new source review permits dated December 23, 1977; October 30, 1996; and September 25, 2000 shall remain in effect unless otherwise superseded, revoked, amended, or terminated.

If the permittee requests that this state operating permit be terminated, information from the stack testing required in Conditions #72, #73, #74, #75, #76, and #77shall not be used to show violations of any condition listed in this permit. However, this data may be used to determine compliance with any previously issued permit that is otherwise not superceded, revoked, amended, or terminated.

b. The permittee may request changes be made to process, operational, record keeping and/or emission limitations in this permit based upon information documented during the stack testing required in Conditions #72, #73, #74, #75, #76, and #77. These changes shall be accompanied by calculations showing the basis for any requested changes and showing that the facility shall be able to maintain its potential to emit beneath major stationary source thresholds as defined in 9 VAC 5-80-1700 et seq.

c. The permittee may submit a statement that the facility is in compliance with all limitations of this permit.

(9 VAC 5-80-950, 9 VAC 5-80-960, 9 VAC 5-80-1710, 9 VAC 5-80-850)

The following reporting conditions have been placed in the permit to support the periodic monitoring plan for this facility.

- Times, dates, and results of annual cyclone integrity inspections.
- Times, dates, and explanations of inoperative or bypassed required control devices, to include baghouses, cyclones, rotary air locks, covered conveyors, and enclosures.
- Results of all stack tests.
- Results of all Method 9 observations.

- Changes in any equipment specifications that may alter the results of any emission limitation demonstration.

- Semi annually, the amount of wood furnish sent through each final dryer system, the hours of operation of each pre dryer system, the amount of fuel used in each fuel burning unit, the results of compliance equations, the amount of board produced, the average sulfur content of the fuel oil used in terms of % by weight.

- Semi-annually, total annual emissions for the facility for the previous consecutive 12 months.

Obsolete or Redundant Requirements

The following conditions from the July 17, 2002, state operating permit were not included in the Title V permit. Each condition is followed by the reason for not including it in the Title V permit.

#1 This condition lists the documents and applications that are the basis for the state operating permit. The Title V application contains much of the same information.

#2 This condition is an equipment listing. The Title V permit has an equipment listing that includes all permitted equipment.

#81-#88 These conditions are general conditions and are contained in the general condition section of the Title V permit. There is no need to repeat these conditions.

Streamlined Requirements

9 VAC 5-40-280 b Sulfur Dioxide – Combustion Installations (Rule 4-4)

This limitation, as demonstrated above, allows a maximum of 600.7 lbs/hr from the equipment listed below. However, this equipment is already limited to lower emissions of SO2 in their permit, as shown below. The lower limitations are derived from the use of natural gas, which has very low SO2 emissions, and the use of 0.2% by weight distillate oil, which is a requirement of the state operating permit.

EUID	Equipment Description	Rated Capacity	Permitted limitation
FS-1A	Face system pre dryer	25 mmbtu/hr natural gas 25 mmbtu/hr #2 fuel oil	5.8 lbs SO2/hr Condition #51, 7/17/02
FS-2	Face system final dryer	25 mmbtu/hr natural gas 25 mmbtu/hr #2 fuel oil	5.1 lbs SO2/hr Condition #52, 7/17/02
CS-1, CS-2, & CS-3	Core system pre dryer, final dryer and Energex burner	25 mmbtu/hr natural gas 25 mmbtu/hr #2 fuel oil (each for pre and final dryer) 27.55 mmbtu/hr sanderdust for Energex	10.8 lbs SO2/hr Condition #50, 7/17/02
		Total:	**21.7 lbs/hr SO2**

Therefore, the permit limits are more stringent than the SO2 emission limitation originating in Rule 4-4 for general process operations, and the Rule 4-4 standard of 600.7 lbs/hr may be streamlined out of the Title V permit.

9 VAC 5-40-900 B.1. (Rule 4-8)

This paragraph requires that the following emission unit meet the following particulate standards:

EUID	Equipment Description	Heat Input Capacity	lbs PT/hour by Rule 4-8	Lbs PT/hr by 7/17/02 permit
B-1	Keeler Boiler(1977)	26.54 mmbtu/hr sanderdust	**12.5 lbs pt/hr**	8.0 lbs/hr

Since the lbs/hr emission limitations are lower in the permit than those required by Rule 4-8, the 4-8 limitations will be streamlined out of the TV permit.

However, since the state operating permit dated 7/17/02 contains no standard for these boilers in terms of lbs/mmbtu, the 0.47 lbs/mmbtu of particulate standard from Rule 4-8 will be carried over into the TV permit.

9 VAC 5-40-930 A.1. Sulfur Dioxide-fuel burning equipment installation (Rule 4-8)

This paragraph in Rule 4-8 requires that the installation, which consists of B3, emit no more than 70.3 lbs SO2/hr. The 7/17/2002 permit places the following limitations on these boilers:

EUID	Equipment Description	Heat Input Capacity	7/17/02 permit SO2 limit
B-1	Keeler Boiler(1977)	26.54 mmbtu/hr sanderdust	15.6 lbs/hr

The permit is more stringent than the requirement for SO2 from the installation that originates in Rule 4-8. Therefore, the Rule 4-8 requirement will be streamlined from the Title V permit.

9 VAC 5-40-2270 B. Particulate standard for wood working operations (Rule 4-17)

This regulation places a standard of **0.05 grains/standard cubic feet** of exhaust gas on the following equipment and vents:

EU-ID	EU Description	PCP ID	Exhaust ID	7/17/02 permitted standard for PT
FS-3A FS-3B FS-3C	Hog Accepts Aspirator Fines Aspirator	C04	EP-FS-3	**0.01 gr/dscft**
FS-5A FS-5B FS-5C	Pallman face refiners 1, 2, and 3	C06	EP-FS-5	**0.003 gr/dscft**
CS-4A CS-4B CS-4C	Shaker screens 1, 2, and 3	C09	EP-CS-4	**0.003 gr/dscft**
CS-5A CS-5B	Shaker screens 4 and 5	C10	EP-CS-5	**0.003 gr/dscft**
CS-6A CS-6B CS-6C CS-6D	Bauer refiners 1 through 4	C11	EP-CS-6	**0.003 gr/dscft**
CS-7A CS-7B	Bauer refiners 5 and 6	C12	EP-CS-7	**0.003 gr/dscft**
PF-1	Production line air handling	C13	EP-PF-1	**0.003 gr/dscft**
PF-3A PF-3B	Pressline trim saws Jenkins T&E saw	C14	EP-PF-3	**0.003 gr/dscft**
PF-5	Kimwood 6-head sander	C15 C16	EP-PF-5A EP-PF-5B	**0.003 gr/dscft**
PF-6	Dryer sanderdust collection system and bin	C17	EP-PF-6	**0.003 gr/dscft**
PF-7A PF-7B	IMC saw Board breaker	C18	EP-PF-7	**0.003 gr/dscft**

The standards in the 7/17/02 permit are much more stringent than the standard required by Rule 4-17. Demonstration of compliance with the permitted limit will always demonstrate compliance with the Rule 4-17 limit. Therefore, the Rule 4-17 standard will be streamlined out of the permit.

Periodic Monitoring

The following table delineates each limitation and its respective periodic monitoring requirements:

Limitations	Parameters	Monitoring	Record Keeping	Reporting
#3, 7/17/02 permit 78% control by C01 cyclone on Keeler boiler, B1. **SEE NOTE 1 BELOW**	*use of cyclone *integrity inspection	*annual inspection *use of cyclone	*date of inspection; *results of inspection; *times and dates when cyclone was not in use or inoperative	*annually, results of inspection *times and dates when cyclone was not in use or inoperative
#4, 7/17/02 permit FS1B McConnell burner and face predryer FS1A to be controlled by cyclone C02.	*use of cyclone *integrity inspection	*use of cyclone *annual inspection	*times and dates when cyclone was not in use or inoperative *date of inspection *results of inspection	*times and dates when cyclone was not in use or inoperative *annually, results of inspection
#5, 7/17/02 permit Face final dryer FS2 to be controlled by cyclone C03.	*use of cyclone *integrity inspection	*use of cyclone *annual inspection	*times and dates when cyclone was not in use or inoperative *date of inspection *results of inspection	*times and dates when cyclone was not in use or inoperative *annually, results of inspection
#6, 7/17/02 permit FS3B & FS3C, aspirators, controlled by baghouse C04 w/ grain loading max of 0.01 gr/dscft #68, 7/17/02 permit opacity limit of 5% **SEE NOTE 2.**	*opacity, 5%, will serve as surrogate for particulate since 5% opacity or less indicates good operation and maintenance such that the baghouse should easily be able to meet grain loading standard	*monthly, while operating, check for visible emissions. If there are visible emissions, perform Method 9.	*date, time and results of monthly checks	*times and dates when Method 9 was >5%.
#7, 7/17/02 permit fugitive emission control of aspirators FS3B and FS3C	*use of rotary air lock, covered conveyors, and enclosure	*use of rotary air lock, covered conveyors, and enclosure	*times and dates when listed equipment was not in use or inoperative	*times and dates when listed equipment was not in use or inoperative
#8, 7/17/02 permit trim recovery bin FS4 controlled by cyclone C05	*use of cyclone *integrity inspection	*use of cyclone *annual inspection	*times and dates when cyclone was not in use or inoperative *date of inspection *results of inspection	*times and dates when cyclone was not in use or inoperative *annually, results of inspection

Limitations	Parameters	Monitoring	Record Keeping	Reporting
#9-#13,16,17,18,19,20 7/17/02 permit following baghouses controlling following equipment must meet 0.003 gr/dscft: FS5A,B,C C06 CS4A,B,C C09 CS5A,B C10 CS6A,B,C,D C11 CS7A, B C12 PF1 C13 PF3A,B C14 PF5 C15, 16 PF6 C17 PF7A,B C18 #68 7/17/02 permit 5% opacity **SEE NOTE 2**	*opacity, 5%, will serve as surrogate for particulate since 5% opacity or less indicates good operation and maintenance such that the baghouse should easily be able to meet grain loading standard *pressure drop	*monthly, while operating, check for visible emissions. If there are visible emissions, perform Method 9. *once per week, record reading from pressure drop device on each baghouse	*date, time and results of monthly checks *pressure drop logs of monthly readings	*times and dates when Method 9 was >5%. *actions taken when baghouse pressure drop readings are out of the range set by manufacturer for good operations.
#14, 7/17/02 permit core pre dryer CS1 to be controlled by cyclone C07	*use of cyclone *integrity inspection	*use of cyclone *annual inspection	*times and dates when cyclone was not in use or inoperative *date of inspection *results of inspection	*times and dates when cyclone was not in use or inoperative *annually, results of inspection
#15, 7/17/02 permit core final dryer CS2 to be controlled by cyclone C08	*use of cyclone *integrity inspection	*use of cyclone *annual inspection	*times and dates when cyclone was not in use or inoperative *date of inspection *results of inspection	*times and dates when cyclone was not in use or inoperative *annually, results of inspection
#24, #25, 7/17/02 permit fuel for B3 and B2 is natural gas. Throughput limitation of 10 mmcft/yr.	*boiler design (fuel types) *annual fuel usage	*annual fuel usage	*amount used annually in mmcft/yr for both boilers	*annually, amount of fuel used by the boilers (performed in emissions inventory reporting) and any exceedence of 12 month rolling sum of fuel used.
#26, #27, 7/17/02 permit fuels and throughput for B1	*boiler design (fuel types) *annual amount of each fuel used	*annual fuel usage for each fuel	*results of the formula for compliance listed in Condition #27 monthly	*annually, amount of each fuel used in the boiler (performed in emissions inventory reporting) and any exceedences of the formula in #27.
#28, #34, 7/17/02 permit hours of operation limitations on core CS1 and face pre-dryers FS1A	*hours of operation	*hours of operation, summed monthly for the previous 12 month sum	*12 month sums of hours of operation	*annually, hours of operation for each unit (performed in emissions inventory reporting) and any exceedences of limitations in #28 & #34.
#29, #30, 7/17/02 permit fuels and throughput for core pre dryer supplemental heater CS1	*heater design (fuel types) *annual amount of each fuel used	*annual fuel usage of each fuel	*results of the formula for compliance listed in Condition #30 monthly	*annually, amount of each fuel used in the heater (performed in emissions inventory reporting) and any exceedences of the formula in #30

Limitations	Parameters	Monitoring	Record Keeping	Reporting
#31, #32, 7/17/02 permit fuels and throughput for core final dryer supplemental heater CS2	*heater design (fuel types) *annual amount of each fuel used	*annual fuel usage of each fuel	*results of the formula for compliance listed in Condition #32 monthly	*annually, amount of each fuel used in the heater (performed in emissions inventory reporting) and any exceedences of the formula in #32
#33, 7/17/02 permit wood furnish throughput limit for core final dryer CS2	*throughput of wood furnish	*throughput of wood furnish	*results of 12 month sum of wood furnish throughput	*annually, amount of wood furnish sent to the dryer and any exceedences of the 12 month sum limitation
#35, #36, 7/17/02 permit fuels and throughput for face pre dryer supplemental heater FS1A	*heater design (fuel types) *annual amount of each fuel used	*annual fuel usage of each fuel	*results of the formula for compliance listed in Condition #36 monthly	*annually, amount of each fuel used in the heater (performed in emissions inventory reporting) and any exceedences of the formula in #36
#37, #38, 7/17/02 permit fuels and throughput for face final dryer FS2	*heater design (fuel types) *annual amount of each fuel used	*annual fuel usage of each fuel	*results of the formula for compliance listed in Condition #38 monthly	*annually, amount of each fuel used in the heater (performed in emissions inventory reporting) and any exceedences of the formula in #38
#39, 7/17/02 permit wood furnish throughput limit for face final dryer FS2	*throughput of wood furnish	*throughput of wood furnish	*results of 12 month sum of wood furnish throughput	*annually, amount of wood furnish sent to the dryer and any exceedences of the 12 month sum limitation
#40, 41,#42, 7/17/02 permit fuel allowed and fuel throughput limit for McConnell burner FS1B and Energex burner CS3	*burner design (fuel type) *annual amount of sander dust used in each burner	*annual fuel usage in each burner	*results of 12 month sum of sander dust used for each burner	*annually, amount of wood dust burned in each burner (performed in the emissions inventory reporting) and any exceedences of the limitations in #41 and #42.
#43, 7/17/02 permit particleboard production limit on PF2	*annual amount of board produced, summed monthly	*annual amount of board produced, summed monthly	*annual amount of board produced, summed monthly	*annually, amount of board produced (performed in the emissions inventory) and any exceedences of limitation
#44,#45, 7/17/02 permit distillate fuel S content limitations of 0.2% by wt	*S content of fuel	*S content of fuel	*fuel suppliers certificates	*annually, average wt % of S in distillate (performed in the emissions inventory) and any exceedences of the limitation on a shipment basis
#46, #47,#48, 7/17/02 permit hourly and annual emission limitations for B2, and B3	*See emission limitation demonstration below	*see emission limitation demonstration below	*AP-42 factors *calculation formulas *maximum capacities of units *throughput of natural gas to boilers	*annually, amount of gas used by the boilers (performed in the emissions inventory) and any exceedences of the limitation on throughput

Limitations	Parameters	Monitoring	Record Keeping	Reporting
#49, 7/17/02 permit hourly and annual emissions for B1 Keeler boiler	*hourly emission rates via stack testing *for particulate, annual inspection for integrity and record keeping * for SO2 and VOC, see emission limitation demonstration below and requirements for 0.2% by wt S fuel	*stack test for PT, NOx, CO 1/5 years *cyclone inspections *S content of fuel *emission factors for SO2 & VOC, calculations, and rated capacity of unit	*AP-42 factors *calculation formulas *maximum capacities of units *throughput of sander dust and fuel oil to boiler *%S in fuel oil *test reports *results of cyclone inspections *periods when cyclone was not used while boiler was burning sanderdust	*annually, amount of fuel oil and sander dust used. Also, S content of fuel oil. Both will be required by emissions inventory reporting. Any exceedences of btu limitations.
#50, 7/17/02 permit hourly and annual emissions for the core system, CS1, CS2,and CS3	*hourly emission rates via stack testing for CO, NOx, PT, PM10, and VOC *for particulate, annual inspection for integrity of cyclones and record keeping *for SO2, fuel S content	*testing 1/5 years for CO, NOx, PT, PM10 and VOC *annual inspections of cyclones *S content of fuel *amounts of fuel, furnish, to the system *hours of operation	*test results *hours of operation *wood furnish throughput *fuel throughput *S content of fuel	*test results *annually, throughput of furnish, hours of operation, fuel used in the emissions inventory. Also, S content of fuel. *Any exceedences of btu limitations.
#51, 7/17/02 permit hourly and annual emissions for the McConnell burner FS1B and face pre dryer FS1A	*hourly emission rates via stack testing for CO, NOx, PT, PM10, and VOC *for particulate, annual inspection for integrity of cyclones and record keeping *for SO2, fuel S content *hours of operation of predryer	*testing 1/5 years for CO, NOx, PT, PM10 and VOC *annual inspections of cyclones *S content of fuel *amounts of fuel to the system *hours of operation of pre dryer	*test results *hours of operation of predryer *fuel throughput *S content of fuel	*test results *annually, hours of operation, fuel used in the emissions inventory. Also, S content of fuel. *Any exceedences of btu limitations.
#52, 7/17/02 permit hourly and annual emissions from the face final dryer FS2	*throughput of wood furnish *VOC, NOx, CO, PT and PM10 test data *fuel usage *fuel S content	*throughput of wood furnish *test data for VOC, NOx, CO, and particulate *fuel usage data *fuel certifications *cyclone integrity inspections	*throughput of wood furnish *test data *fuel usage data *fuel certifications *cyclone integrity inspections	*annually, throughput of wood furnish and fuel usage as part of the emissions inventory update process. Also, average annual S content. *any time S content exceeds limits. any time btu limitations are exceeded *results of integrity inspections
#53, #54, 7/17/02 permit hourly and annual emissions from press and board cooler **SEE NOTE 3**	*production of particle board *See emissions limitation demonstration for PT below	*production of particle board *see emissions limitation demonstration for PT below	*NCASI emission factors for PT, maximum capacities, calculations for PT *production data	*annually, amount of board produced

Limitations	Parameters	Monitoring	Record Keeping	Reporting
#56, 7/17/02 permit hourly and annual emissions from the trim recovery bin	*opacity of 10%	*1/month , check to see if any visible emissions from cyclone vent. If so, do Method 9.	*records of times, dates, and results of monthly checks	*results of any Method 9 observations performed.
#55, #57-#66, 7/17/02 hrly and annual particulate emissions for baghouse exhausts	*See emission limitation demonstration	See emission limitation demonstration	*emission factors, ACFM ratings of baghouses, calculations	Any changes made to baghouses that may affect maximum air flow ratings.
#55, #57-#66, 7/17/02 0.003 gr/dscft or, in the case of exhaust point EP-FS-3, 0.01 gr/dscft **SEE NOTE 2**	*monthly vee checks *differential pressure across each baghouse	*opacity of 5% or less *differential pressure	*records of monthly checks of opacity *records of differential pressure readings *records of maintenance performed as a result of monitoring	*results of any method 9 opacity tests
#67, 7/17/02 Total point source emissions limitations	n/a	n/a	*monthly calculation and summation of previous 12 month emissions to determine compliance	*any 12 month period where any limitation is exceeded
#68, 7/17/02 %5 opacity on baghouses	visible emissions	1/month, check for emissions. If any noted, then perform Method 9.	Dates and times of monthly checks. Results of Method 9 tests.	*Results of any Method 9 tests, semiannually
#69, 7/17/02 10% opacity on fugitive emissions from aspirators/hog	visible emissions	1/month, check for emissions. If any noted, then perform Method 9.	Dates and times of monthly checks. Results of Method 9 tests.	*Results of any Method 9 tests, semiannually
#70, 7/17/02 20%/30% opacity on McConnell burner from vent on cyclone C02	visible emissions	1/month, check for emissions. If any noted, then perform Method 9.	Dates and times of monthly checks. Results of Method 9 tests.	*Results of any Method 9 tests, semiannually
9 VAC 5-40-900 A1b 0.47 lbs/mmbtu applies to B3	See emissions limitation demonstration	See emissions limitation demonstration	Boiler capacities, EF, formulas	Any changes to capacities, EF, or formulas
9 VAC 5-40-940 B 20%/60% opacity applies to B1. B2 was built after 1977, and is therefore not applicable. B3 is less than 10 mmbtu/hr and burns only natural gas so it too is exempt from this standard.	*visible emissions	*For B1, 1/month check for emissions. If any noted, then perform Method 9.	Dates and times of monthly checks for B1. Results of Method 9 tests.	*Results of any Method 9 tests, semiannually.

NOTE 1: The draft permit originally contained a requirement for particulate efficiency testing. However, the permittee pointed out in comments received by this office on October 7, 2002 via email (attached) that testing the particulate loading to the cyclone is extremely problematic. The existing duct would not meet Method 5 standards for upstream and downstream distances from disturbances. The duct also could not be modified in case of cyclonic flow. Due to these difficulties in testing, this requirement was removed from the Title V permit.

NOTE 2: The draft permit originally contained a provision that one baghouse for the small particulate sources would be tested each permit term to ensure they are meeting the grain loading requirement of either 0.01 gr/dscft or 0.003 gr/dscft. The baghouse to be tested would rotate each permit term. However, the permittee pointed out in the comments received by this office on October 7, 2002 via email (attached) that testing these baghouses is quite expensive in comparison to the level of emissions they allow. Inspection of the facility by state inspectors and engineers have corroborated that the exhausts of these baghouses flow horizontally from a ring around the edge of each device. Therefore, a large, all encompassing temporary stack must be built for each Method 5 particulate test. The SOP required such a test. The particulate testing cost was increased by $5600 for one such test. This increase in cost means that each such particulate test would cost between $8600 and $10600. Also, several units appear to not have been installed or designed to bear the load of a large temporary stack. For these units, there is a safety concern. As stated above, one such unit, for the Jenkins saw, was tested as part of the SOP. The preliminary test data indicates that the unit will have no problem meeting the 0.003 gr/dscft standard. The final test report has not yet been submitted. All these baghouses are of similar design and all carry guarantees of a performance level of 0.003 gr/dscft. Based on this information, the requirement to test the small baghouses was removed from the permit.

NOTE 3: The draft permit originally contained a provision that required testing of the board cooler once every 5 years. This was based on the emission limitation assigned to the board cooler in the SOP, 21 tpy of VOC. The SOP required initial testing to show compliance with this limit. The DEQ does not yet have the final test report in house. However, preliminary data show that emissions from the board cooler were over estimated and are on the order of 1.5 tpy VOC. See emailed comments received on October 7, 2002. This test data was performed using both a Method 25 as well as a NCASI designed and EPA approved method to speciate the VOC compounds. Therefore, the test data should contain little if any low bias based on testing for VOC as carbon. Also, this test was quite expensive. Due to a very short stack and the presence of cyclonic flow, a stack extension had to be installed and straightening veins added to create the proper flow dynamics for testing. The permittee claimed this test cost about $15,000. Due to the expense involved and the low emission rate of VOC's, the testing requirement was removed from the Title V permit.

B2 Cleaver Brooks Boiler emission limitation demonstration

The following chart shows the AP-42 emission factors (Chapter 1.4, Tables 1.4.1 and 1.4.2, dated 7/98) currently available for a natural gas boiler that has a rated capacity of between 10-100 mmbtu/hr. The product of the rated capacity of this unit (10.5 mmbtu/hr) and these factors show that the unit cannot exceed the limitations in the permit. Therefore, periodic monitoring will be record keeping of the AP-42 factors, the calculations, and the boiler rating.

Pollutant	Emission Factor lbs/mmcft	Hourly emissions EFxcapacity/(1000 btu/cft)	Permitted Limit
TSP	7.6	0.08 lbs/hr	<0.5 lbs/hr, no limit
PM10	7.6	0.08 lbs/hr	<0.5 lbs/hr, no limit
CO	84.0	0.9 lbs/hr	0.9 lbs/hr
NOx	100.0	1.0 lbs/hr	1.0 lbs/hr
SO2	0.6	0.006 lbs/hr	<0.5 lbs/hr, no limit
VOC	5.5	0.06 lbs/hr	<0.5 lbs/hr, no limit

B3 Ames Boiler emission limitation demonstration

The following chart shows the AP-42 emission factors (Chapter 1.4, Tables 1.4.1 and 1.4.2, dated 7/98) currently available for a natural gas boiler that has a rated capacity of <10 mmbtu/hr. The product of the rated capacity of this unit, 5.03 mmbtu/hr and these factors show that the unit cannot exceed the limitations in the permit. Therefore, periodic monitoring will be record keeping of the AP-42 factors, the calculations, and the boiler rating.

Pollutant	Emission Factor lbs/mmcft	Hourly emissions EFxcapacity/(1000 btu/cft)	Permitted Limit
TSP	7.6	0.04 lbs/hr	<0.5 lbs/hr, no limit
PM10	7.6	0.04 lbs/hr	<0.5 lbs/hr, no limit
CO	84.0	0.4 lbs/hr	<0.5 lbs/hr, no limit
NOx	100.0	0.5 lbs/hr	0.5 lbs/hr
SO2	0.6	0.003 lbs/hr	<0.5 lbs/hr, no limit
VOC	5.5	0.03 lbs/hr	<0.5 lbs/hr, no limit

B3 and B2 annual emission limits demonstration

The following charts show, that using the AP-42 emission factors listed above for these two boilers and a maximum throughput allowed of 10 mmcft of natural gas/year, the units cannot exceed their annual emissions:

Pollutant	Emission Factor lbs/mmcft	Annual emissions EFx10mmcft/yrx1ton/2000lbs	Permitted Limit
TSP	7.6	0.04 tpy	<0.5 tpy, no limit
PM10	7.6	0.04 tpy	<0.5 tpy, no limit
CO	84.0	0.4 tpy	0.4 tpy
NOx	100.0	0.5 tpy	0.5 tpy
SO2	0.6	0.003 tpy	<0.5 tpy, no limit
VOC	5.5	0.03 tpy	<0.5 tpy, no limit

Therefore, annual throughput of natural gas is an acceptable method for periodic monitoring of these limitations.

B1 hourly and annual emission limitation demonstration for SO2 and VOC:

The hourly and annual limitations on B1 for SO2 and VOC are based on the SO2 emission factor for distillate oil and the VOC emission factor for wood dust combustion from AP-42. The SO2 factor is based on 0.2% by wt sulfur fuel oil, which is a requirement in the state operating permit dated 7/17/2002. The following chart shows the calculations:

Pollutant	EF	EF origin	B1 Capacity	Hourly emissions*	Annual limitation	Annual emissions**	Allowable emissions 7/17/02 permit	
							lbs/hr	tpy
SO2	28.4 lbs/kgal	AP-42 Table 1.3.1 9/98	23 mmbtu/hr (140kbtu/gal)	4.6 lbs/hr	153600 btu/hr	15.6 tpy	4.7	15.6
VOC	0.608 lbs/ton	AP-42 Table 1.6-3 7/01	26.54 mmbtu/hr (8000 btu/lb)	1 lb/hr	153600 btu/hr	2.9 tpy	1.0	2.9

*Formula for calculation is EF*B1 capacity/heat capacity of fuel
**Formula for calculation is EF*btu limit/heat capacity of fuel

Therefore, record keeping of AP-42 factors, calculations, rated capacities, and fuel throughput, coupled with fuel oil S content, is adequate to ensure compliance with the limitations.

PT emissions from the board cooler and the press emission limitation demonstration

The board cooler and press have emission factors for PT from NCASI. The maximum rated capacity of each unit is 24000 square feet of board/hour. Therefore the emission calculations are as follows:

Unit	Capacity	EF	Hourly Emissions capacity*EF	Annual Throughput	Annual Emissions EF*thruput/2000 lbs/ton	7/17/02 permit limits	
						lbs/hr	tpy
Press PF2	24000 sft/hr	0.03 lbs/kft	.7 lbs/hr	111.3 mmsft/yr	1.7 tpy	0.7 lbs/hr	1.7 tpy
Board cooler PF4	24000 sft/hr	0.014 lbs/kft	.3 lbs/hr	111.3 mmsft/yr	0.8 tpy	0.3 lbs/hr	0.8 tpy

Therefore, keeping records of the capacity, the emission factors, the formulas, and the annual throughputs will be sufficient to show compliance with these emission factors.

Emission limitation demonstration for baghouse particulate emissions

If the grain loading requirement of 0.003 gr/dscft is met by each baghouse (0.01 gr/dscft in the case of C04) then hourly and annual emission rates may be calculated based on the maximum air flow capacity of each baghouse, as demonstrated in the following chart:

Unit & Baghouse ID	Exhaust ID	ACFM of baghouse	Grain loading in grains/dscft	calculated lbs/hr*	calculated tpy**	7/17/02 permit limits	
						lbs/hr	tpy
Aspirators & Hog C04	EP-FS-3	14000	0.01	1.2	5.3	1.2	5.3
Sander C15	EP-PF-5A	37981	0.003	0.98	4.3	2.0	8.7
Sander C16	EP-PF-5B	38972	0.003	1.0	4.4		
Refiners 1-4 C11	EP-CS-6	24344	0.003	0.6	2.7	0.6	2.7
Refiners 5,6 C12	EP-CS-7	24344	0.003	0.6	2.7	0.6	2.7
Screens 1-3 C09	EP-CS-4	44608	0.003	1.1	5.0	1.1	5.0
Screens 4,5 C10	EP-CS-5	39384	0.003	1.0	4.4	1.0	4.4
Saws C14	EP-PF-3	27308	0.003	0.7	3.1	0.7	3.1
Dust Collection C17	EP-PF-6	11160	0.003	0.3	1.3	0.3	1.3
Refiners C06	EP-FS-5	41908	0.003	1.1	4.7	1.1	4.7
Press Reclaim C13	EP-PF-1	41408	0.003	1.1	4.7	1.1	4.7
Saw & Breaker C18	EP-PF-7	24344	0.003	0.6	2.7	0.6	2.7

*formula is grain loadingxACFMx60min/hr/(7000grains/lb)
**formula is grain loadingxACFMx60min/hr/(7000grains/lb)x1ton/2000 lbs

Therefore, periodic monitoring requirements for these limitations are satisfied by keeping records of the maximum air flow of each baghouse, the grain loading limitation on each baghouse, and the formulas necessary for emission rate calculations. Grain loading requirements have periodic monitoring requirements as listed in the chart above.

Emission limitation demonstration for 9 VAC 5-40-900 E=0.47 lbs pt/mmbtu

The following chart shows that as long as the Keeler boiler meets its particulate hourly emission rate and as long as the Ames and Cleaver Brooks boilers burn natural gas, they will meet the emission limitation of 0.414 lbs pt/mmbtu individually and as a group:

Unit & Fuel used	Boiler rating	Fuel heat capacity	Max Emission Rate	lbs pt/mmbtu
B1, Keeler, #2 fuel oil	23 mmbtu/hr	140000 btu/gal	8 lbs/hr	0.347*
B1, Keeler, wood dust	26.54 mmbtu/hr	8000 btu/lb	8 lbs/hr	0.301*

*The formula for the calculation is (hourly emission limitations, lbs/hr)/(boiler rating, mmbtu/hr).

To aid in the understanding of the July 17, 2002 state operating permit calculations, all spreadsheets for this permit are in **ATTACHMENT 1.** Also, to aid in the understanding of various control device, throughput, and testing requirements, the line diagrams for this facility may be found in **ATTACHMENT 2.**

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by ''2.1-20.01:2 and ''10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 3-2001".

These general conditions cite the entire article that follows:

B.2. Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Permits for Stationary Sources
B.3. Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Permits for Stationary Sources

These general conditions cite the section that follows:

B.	9 VAC 5-80-80.	"Application"
B.2.	9 VAC 5-80-150.	"Action on Permit Applications"
B.3.	9 VAC 5-80-80.	"Application"
B.4.	9 VAC 5-80-80.	"Application"
B.4.	9 VAC 5-80-140.	"Permit Shield"
B.5.	9 VAC 5-80-80.	"Application"

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excesses emissions reporting within 4 hours. Section 9 VAC 5-80-250 also requires malfunction reporting; however, reporting is required within 2 days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to this section including Title V facilities. Section 9 VAC 5-80-250 is from the Title 5 regulations. Title 5 facilities are subject to both Sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within 4 day time business hours of the malfunction.

This general condition cites the sections that follow:

F. 9 VAC 5-40-50. Notification, Records and Reporting
F. 9 VAC 5-50-50. Notification, Records and Reporting
F.1. 9 VAC 5-40-50. Notification, Records and Reporting
F.1. 9 VAC 5-50-50. Notification, Records and Reporting
F.2. 9 VAC 5-40-50. Notification, Records and Reporting
F.2. 9 VAC 5-50-50. Notification, Records and Reporting
F.3. 9 VAC 5-40-50. Notification, Records and Reporting
F.3. 9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
F.3.a. 9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources]

U. Failure/Malfunction Reporting

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in section 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

U.2.d. 9 VAC 5-80-110. Permit Content
U.2.d. 9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

STATE ONLY APPLICABLE REQUIREMENTS

There are no state only applicable requirements applicable to this facility.

FUTURE APPLICABLE REQUIREMENTS

This facility will be subject to the Plywood and Composite Wood Products MACT, 40 CFR 63 Subpart DDDD, when this MACT is promulgated. However, this MACT has not yet been proposed. Therefore, this applicable requirement is considered a future applicable requirement.

INAPPLICABLE REQUIREMENTS

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

40 CFR 60 Subpart Dc is not applicable to the boilers B1, B2, and B3 due to the fact that the dates of construction are prior to the applicability date in this regulation.

40 CFR 60 Subpart Kb record keeping requirements are not applicable to the 40000 gallon diesel storage tank listed in the insignificant emissions units because this unit was constructed prior to the applicability date in this regulation.

9 VAC 5-40-Part II Article 4 Emission Standards for General Process Operations (and specifically 9 VAC 5-40-280 b. Sulfur dioxide combustion installation standard) does not apply to the McConnell burner (FS-1B) since the date of construction is after the applicability date in this regulation for combustion installations.

9 VAC 5-40-Part II Article 8 Emission Standards for Fuel Burning Equipment does not apply to the Ames Boiler (B-3) since it burns natural gas and has a maximum rated capacity of less than 10 million btu/hr. This regulation also does not apply to the Cleaver Brooks boiler (B-2) since the date of construction is after the applicability date in the regulation.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
	Wax emulsion storage tank	9 VAC 5-80-720 B	VOC	12,000 gallons
	3 resin storage tanks	9 VAC 5-80-720 B	VOC	10,000 gallons
	Urea/water solution storage tank	9 VAC 5-80-720 B	VOC	12,000 gallons
	Diesel fuel storage tank	9 VAC 5-80-720 B	VOC	40,000 gallons (not Kb)
	Diesel fuel feed tank	9 VAC 5-80-720 B	VOC	1,000 gallons
	Equipment gasoline fuel tank	9 VAC 5-80-720 B	VOC	250 gallons
	Fire pump diesel tank	9 VAC 5-80-720 B	VOC	250 gallons

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION
The permittee did not request that any information be held as confidential business information. Therefore, all information may be provided to the public.

PUBLIC PARTICIPATION

Prior to public participation, the permittee was given the opportunity to comment upon the draft Title V permit and the Title V statement of basis. The following is a synopsis of substantial comments, and DEQ's response.

- The permittee requested that the particulate removal efficiency testing requirement for the Keeler boiler be removed for reasons explained in NOTE 1.

DEQ agreed and removed the requirement.

- The permittee requested that the particulate testing for the baghouses controlling small particulate sources be removed for reasons explained in NOTE 2.

DEQ agreed and removed the requirement.

- The permittee requested that the VOC testing for the board cooler be removed for reasons explained in NOTE 3.

The DEQ agreed and removed the requirement.

- The permittee requested that all drop points and the board cooler be considered insignificant sources based on their potential to emit being <5 tpy of criteria pollutants.

The DEQ did not agree to this request. For a unit to be considered insignificant, it must have no applicable requirements. Due to the inclusion of these units in the summation of emissions in the state operating permit, which allows the facility to maintain a synthetic minor status for PSD purposes, these units do have applicable requirements in that all point source emissions must be less than the limits in the state operating permit. Placing these units in the insignificant activities listing would therefore not be appropriate. If the state operating permit is rescinded and there are no other applicable requirements on these units, then they may be examined for inclusion in the insignificant activities listing.

- The permittee requested that the weekly visible emission checks required on the McConnell burner and the Keeler boiler be changed to monthly. The reasoning for the McConnell burner is that the presence of water vapor will always trigger a Method 9 and

performing a Method 9 VEE weekly would require a lot of man hours for a unit that generally operates in a steady state fashion. The permittee requested that the Keeler boiler be allowed monthly instead of weekly checks was for consistency purposes with all other emissions checks and therefore an easing of paperwork.

DEQ agreed with these requests and made these changes to the Title V permit and statement of basis.

- The permittee requested that the 30 day period listed in the general conditions, Condition C 3, be extended to 60 days.

This change was not made. This condition is currently being evaluated by central office staff to ensure compliance with all facets of the Title V regulation. Extending the period was not considered prudent considering that the period may be shortened in the future.

- The permittee requested that the requirement in general conditions, D.2., which requires that each term or condition of the Title V permit be identified in the certification, be modified to allow only a general compliance statement.

This change was not made. The regulatory requirement is for the listing of EACH term. See 9 VAC 5-80-110 K.5.c.(1).

- The permittee requested that the requirement in general conditions, D.4., which requires the permittee to note if compliance is continuous or intermittent, be modified to more closely match the language in the regulation (9 VAC 5-80-110 K.5.c.(2).)

DEQ-PRO noted that this language, which was consistent with language in an older version of the Title V regulation, does not correlate with the current language in the Title V regulation. This question was forwarded downtown for further consideration.

EPA Region III was given the opportunity to comment on this permit. The permit was proposed to EPA Region III on October 15, 2002. Region III made no comments on the draft permit or draft SOB.

The draft permit was placed in public notice in the Richmond Times Dispatch from October 17, 2002 to November 17, 2002. This was a concurrent notice with the EPA Region III 45 day review. No comments were received as part of the public comment period.

ATTACHMENT 1
7/17/02 state operating permit spreadsheets

ATTACHMENT 2
Facility Line Diagrams